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To: Bucholtz

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CC:

Date: 8/29/2013 8:40:16 AM

Subject: FW: Review of K Zoo FS

Here's some more back and forth with Steve Ells from my EPA-HQ CSTAG team. Any advice on responding would be great. I don't know all of the history behind the 0.33 detection limit requirement/justification.

Jim

From: Ells, Steve
Sent: Thursday, August 29, 2013 7:39 AM
To: Saric, James
Cc: Gustavson, Karl; Greenberg, Marc
Subject: RE: Review of K Zoo FS

I think a detection limit in sediment of only 0.33 ppm could be problematic, can't EPA and DEQ require a lower limit for this site?

From: Saric, James
Sent: Wednesday, August 28, 2013 4:52 PM
To: Ells, Steve
Cc: Gustavson, Karl; Greenberg, Marc
Subject: RE: Review of K Zoo FS

Steve,

Thanks for your feedback and taking the time to review the document. I'll forward this to my review team before I get back to the PRPs. We had a call with the PRPs today and presented some preliminary comments. I have provided them below. I think several of them are consistent with your comments. We believe the correct fish tissue PRG is 0.11 ppm considering the high-end sport angler with 100% bass diet. We also believe the sediment value of 0.33 is correct to try and achieve those goals. The sediment PRG value of 0.33 is explained pretty well in the document and its also the Michigan DEQ administrative required detection limit for PCBs.

Regarding the TCRA work in Plainwell, we don't believe there are any significant hotspots that will need any removal, particularly since they were able to reach the cobble bottom of the natural channel when they did the sediment removal. Also it was agreed upon to let the mid-channel prism erode downstream after the Plainwell dam was removed. More than 85% of that prism is gone. So, I see no need to do any immediate sampling, or pull out sections of the River from the ROD. We have more

than enough information to sign a ROD for this Area of the Kalamazoo River. SWAC values are an estimate based upon data and for the Plainwell Dam area it's based upon some data that was taken pre-Removal. That same is true with Portage Creek. Even in Portage Creek when we replaced excavation areas with clean fill that value was estimated at (0.33) since it is the PCB detection limit. Therefore, that can impact SWAC calculations.

Hopefully, the comments below help Karl and Marc with their review. My contractors as well as MDEQ have not yet completed their review. I'll get back to you on all of this soon. Looks like we will probably be going to the Remedy Review Board. Maybe we can make that meeting, but realistically it's a stretch. I am all for getting a CSTAG review of the site, but we won't have a Proposed Plan until next summer.

Thanks
Jim Saric
(312) 886-0992

1. ASTM: The FS needs to reflect that the original FS was submitted to EPA with the ASTM and that this version has been rewritten and that the ASTM will not be resubmitted as an attachment but it has been reformatted and necessary portions incorporated into the FS to support the remedies. Unfortunately there are sections of the ASTM which were directly attached (i.e. Appendix G) that did not incorporate EPA's required changes, so those will have to be made.
2. RAO 1: Not sure why you reworded what was provided in EPA's comments and submitted to Chase in an email in April based upon changes in the MDEH calculations. This information was agreed upon.
You should revised to the exact wording provided in that email or under RAO 1 include that the *The fish tissue goal for bass will be achieved by reducing sediment PCB SWAC in each of eight segments of the river in Area 1 to 0.33 ppm or less as soon as possible following completion of the remedial action*
3. Fish PRG is inconsistent with RAO 1 (0.11 vs. 0.2) number in Executive summary and the rest of the document. Also Appendix I uses a "concentration to achieve" of (0.23). These numbers are all inconsistent. We believe the Fish PRG should be 0.11, which is consistent with the high end sport angler 100% SMB diet, and that the fish trends need to be revised to reflect the time period to achieve the (0.11). This will not impact any of the remedies as it only impacts the time period to achieve the fish tissue levels.
4. BACKGROUND: Background must include both Morrow and Caresco dam areas in the discussion and calculations. However, background is not going to limit our decisions at this point. Further, as EPA and MDEQ has commented in the previous FS. Morrow is not a better background location than Caresco. You can use that information to show potential background values and ranges. That will be used for future comparison as fish tissue declines, or not, post remedy. However the high end of current background (0.23) cannot be used as the concentration to achieve for fish tissue.
5. The report can do a much better job summarizing the TBERA. There were comments that were made by EPA that were not included in the corresponding attachments and the conclusions and uncertainty discussion provided is not quite correct. EPA will provide comments on this.
6. The Flood plain PRG of 11 ppm should include protectiveness statements for avian species, as it was not solely derived based upon shrews. Need to include language and reference Appendix G. Also, there needs to be more discussion on why the RAL of 20 was selected for the floodplains, as well as the percentage of home ranges protected or not protected. Need to include this information in Chapter 2.
7. The sediment PRG does not provide enough rationale for its selection. Also, it should include the discussion of the MDEQ detection limit, as that was also part of the reasoning behind the selection of (0.33).
8. EPA recalculating the SWACs for Portage Creek. We will provide that. However, this document does not describe any rationale for additional work, or not, in Portage Creek. This should be treated no differently than work completed in Section 8 (Plainwell dam)
9. Delete the scoring and ranking of each remedy as it should not be part of the FS, as it's too subjective, further EPA does not concur with the scoring and ranking and conclusions about preferred remedies in Chapters 4, 5, and 6.
10. The Fish trend discussion Chapter 4, table 4-1 and Appendix I do not break fish trends down by each sediment alternative. EPA requested this trend approach in our

previous FS and comments and our recent discussion. The current FS can not support the conclusions that there are no differences in fish tissue reduction rates between sediment remedies 3 and 4, since this information wasn't provided.
11. Bring back some of the mass removal discussion from the previous FS in relation to RAO 4 for the various sediment alternatives, and the overall remaining mass and potential mass removal from the remaining hot spots. This is particularly important for the Sed 3 and Sed 4 remedies.
12. I don't believe a TSCA ARAR waiver is necessary, just risked-based approval. Not sure about MI NREPA water quality standard technical impractibility determination.
13. The floodplain remedies do not discuss residential sampling, as mentioned as required in Chapter 3.

From: Ells, Steve
Sent: Wednesday, August 28, 2013 2:04 PM
To: Saric, James
Cc: Gustavson, Karl; Greenberg, Marc
Subject: Review of K Zoo FS

Jim, I have completed my review of the July 29, draft of the FS and have the same concerns that I relayed to you in my email of 11/29/12 on the previous draft where I said: "Jim, I have gone thru the draft and have some concerns as well as several questions. I am worried that the RPs are underestimating the current risks and over-estimating the predicted effectiveness of MNR. Their preference for limited active remediation may be appropriate, but the justification needs bolstering. The FS implies that a surface sediment PCB SWAC of 0.33 ppm will lead to protective concentrations in fish. This value seems pretty high. Assuming a fish ingestion rate of 17.5 g/d (the OW-recommended value for high-end recreational fishers, equivalent to 2 meals/month), the fish tissue concentration equivalent to a non-cancer HI of 1 is about 80 ppb in fillet. Even assuming a relatively low BSAF of 2 and typical % OC in sediment and % fish lipids, this means the protective conc. in surface sediment needs to be about 40 ppb. The document did say that risk-based concentrations were calculated, but they were not presented in the FS. Figure 2-1 implies that it might be 200 ppb for a HI of 1."

I did find more information in this draft, but I still believe the risk-based protective concentrations in fish of 0.23 mg/kg and sediment of 0.33 mg/kg are too high. Table 2-4 presents the smallmouth bass tissue value for high-end anglers as 42 ppb for a cancer risk of 1 x 10-5 and an 72 ppb for non-cancer. These are the numbers that should be clearly stated as the risk-based remediation goals. The background fish tissue conc. are reported in Table 2-5. The mean conc. above Morrow Lake is 30 ppb, while the conc. in Morrow Lake is much greater at 200 ppb. More explanation needs to be given why a conc. of about 200 ppb was chosen as background and thus also apparently used as the PRG. Based on this information, is also clear that Morrow Lake is a current source of PCBs, this needs to be discussed as well; e.g., are the any ongoing sources?

I have never seen a sediment remediation goal for PCBs that is greater than the goal for fish tissue. This is because they used a site-specific BSAF of 0.44; I have never seen a BSAF for PCBs less than 1. The rationale for why this BSAF is so low compared to all other sites needs to be explained as well as the uncertainties surrounding this number. I am not suggesting that a decrease in the protective smallmouth bass fish fillet value and an increase in the BSAF and the corresponding potential decrease in the sediment cleanup value will lead to the selection of a different alternative, but EPA and the RPs must be more transparent in how they got to these values and how long it will take each remedial alternatives to reach the most appropriate risk-based or background remediation goals.

Scoring the 7 NCP criteria using equal weighing is not appropriate, more weight should be given to the threshold criteria. Because of this, the importance of this scoring should be substantially downplayed.

More information and data should be reported on the effectiveness of the removal action at the Plainwell dam/impoundment that was completed in 2009. The 2009 sediment sampling reported an average conc. of 1.7 ppm with a max. value of 48. There could very well be some "hotspots" in this section warranting action now. Why are we waiting until design to get more information on Section 8? We need these data now in order to make a decision for this section. You should consider not making this a final action for section 8; exclude it from this ROD, or make this an interim action. Data suggest that the TCRA was not as effective as thought/hoped.

Due to busy schedules, I could not entice any of the Regional CSTAG members to review this document, but Marc Greenberg and Karl Gustavson said they will try to give it a review. Please give some more thought when you think a CSTAG review of the site (we would need a draft proposed plan and revised Consideration Memo in addition to a briefing package) is needed. Note that we have a joint NRRB meeting in Seattle scheduled for Portland Harbor the last week of Jan.

Steve

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